

SUSIE COWLEY-HASELDEN

6. ANALYSING DISCOURSE IN THE LIMINAL SPACE

Talking Our Way through It

ABSTRACT

This chapter is the first step to eradicating ‘language blindness’ (a proclivity for overlooking language use) within threshold concept research. Through an analysis of learners’ knowledge and language practices within the liminal space, it is hoped that insight might be gained into the discourse necessary to acquire troublesome knowledge. Though approached from the perspective of an applied linguist, this chapter offers some understanding of the discourse of the liminal space which is pertinent and applicable to learners in all disciplines.

INTRODUCTION

The liminal space has been under-researched in the field of threshold concepts (Land, Rattray, & Vivian, 2014). No more so than when considering the discourse that is required to traverse it. Land et al. (2014) observe that to acquire troublesome knowledge requires a shift in discourse, but, to date, there has been no analysis of what this actually means in practice. This chapter analyses learners’ discourse offering insight pertinent to all disciplines into the language and knowledge practices required to enable passage through the liminal space. Prior to the analysis, some background will be given to the study that informs this chapter, including an overview of its purpose and methodology. ‘Theory knowledgeability’ will be introduced as the threshold concept that is the nucleus to the study, and an overview will be given of the two frameworks being employed to analyse the discourse within the liminal space.

THE STUDY

Background

Some background should be given to the study that has led to this chapter. The field of English for Academic Purposes (EAP) exists to prepare students, traditionally for whom English is not their first language, for their academic studies at university.

This preparation can either exist before students embark on their studies (often due to the fact that they have not yet met the English language requirement for university entry – what is known as *pre-sessional* in the UK context), or in tandem with their academic studies (*in-sessional*). EAP is often not simply language teaching; it also includes a focus on academic skills required to succeed on university level courses and varying degrees of engagement with material directly related to the students' academic disciplines. Herein lies a tension within the field. As many EAP practitioners are trained in language teaching, language is often foregrounded at the expense of exploring subject-specific knowledge, which, as non-specialists, the EAP practitioner may feel uncomfortable 'teaching'. A detrimental consequence of this is that pre-sessional courses are often what Maton (2014) would term 'knowledge blind', defined as that which 'focuses attention on processes of learning and whose knowledge is being learned, but obscures what is being learned and how it shapes these processes and power relations' (Maton, 2014, p. 7).

While the field of EAP is guilty of 'knowledge blindness', much educational research pertinent to this study in the areas of threshold concepts (Land, Meyer, & Smith, 2008; Meyer & Land, 2006; Meyer, Land, & Baillie, 2010) and Decoding the Disciplines (Middendorf & Pace, 2004; Shopkow, 2010), is also guilty of 'language blindness'. While there may be acknowledgement of the need for an evolution in discourse in successful acquisition of a threshold concept (Land et al., 2014; Matsuda, 2016), threshold concepts literature to date fails to offer any actual discourse analysis to provide insights into how language use shapes this evolution and what language is legitimate in this context. This chapter looks to Flowerdew (2013) to provide a definition of discourse and discourse analysis. Discourse is not simply sentence-level language use, but language used in context:

[T]he rationale for a contextualised ... consideration of language is based upon the belief that knowing a language is concerned with more than just grammar and vocabulary: it also includes how to participate in a conversation or how to structure a written text. (Flowerdew, 2013, p. 1)

Discourse analysis is a particularly interdisciplinary endeavour, employed in a multitude of fields outside linguistics, analysing language in terms of its structure and/or its function (Flowerdew, 2013). It is a predominantly qualitative methodology concerned with generating rich description, rather than measuring instances of language use in context (though strands of discourse analysis do this too) (Flowerdew, 2013). For Flowerdew (2013, p. 2) 'the discourse analyst considers the particular meanings and communicative forces associated with what is said or written'.

This paper holds with Coffin and Donohue's (2014, p. 4) view that 'academic knowledge does not consist of academic content and behaviours learned independently of language and literacy. Nor are language and literacy simply carriers of academic content and behaviours. Rather, knowledge, behaviours, and language develop symbiotically' [sic]. The study that underpins this paper is an attempt to reveal

this symbiotic development through the analysis of student discourse, focusing on knowledge *and* language practices within the liminal space.

Methodology

In order to eradicate knowledge blindness on a generic EAP programme, participants in this predominantly qualitative study discussed reading material that aims to build their ‘theory knowledgeability’. As will be explored below, it is the knowledge of what is being learned *and* how it shapes the process of learning (Maton, 2014) that presents itself as a threshold concept. The discussions students had manifest as *semiotic mediation* (Coffin & Donohue, 2014; Hasan, 2002; Vygotsky 1978), defined as ‘engaging with instructors and students, as well as engaging students and instructors with each other, in mutual inquiry and learning’ (Coffin & Donohue, 2014, p. viii). Taking this approach is a response to the acknowledgment that the EAP practitioner is not a subject specialist in the range of disciplines represented in the EAP classroom and therefore cannot ‘teach’ subject-specific material. What we can do is engage with our students in a mutual exploration of the concepts presented in the reading.

To enable this mutual inquiry and learning, the students took part in a seminar discussion centred on a text that explored the theory of semiotics within the various fields they were going on to study. Semiotics was chosen by the teacher, as it is a theory that transcends disciplinary borders and is therefore, in Bernstein’s (1990) terms, of weaker classification. Bernstein defines classification as the ‘degree of insulation between categories of discourse, agents, practices, contexts’ (1990, p. 214). The greater the insularity, the stronger the classification, meaning that the less accessible a discipline is to an ‘outsider’, the stronger its classification is (as with a discipline like physics, for example). However, a discipline like cultural studies that crosses borders with a range of other disciplines in terms of discourse, agents, practices and contexts, exhibits weaker classification. Operating within the confines of one discipline is not desirable in the context of the EAP classroom where the students are often from a range of disciplines.

In addition to taking part in a seminar discussion, participants also took part in a post-discussion focus group to discuss their thoughts on the activity. They also kept a diary intended to record the ‘metacognitive affect’ of taking part in the discussion.

The participants’ discussion and focus group were transcribed according to transcription practices within the field of language research (Mackey & Gass, as cited in Allwright & Bailey, 1991). This paper explores, as a heuristic, the resultant discourse analysing both language practice (employing Systemic Functional Linguistics) and knowledge practice (employing Legitimation Code Theory). This performs a more holistic analysis of the discourse.

The study gained ethics approval from both the author’s institution of employment and the institution of study.

Participants

The participants of the study were a sample of convenience (Dörnyei, 2007) and consisted of seven international graduates progressing onto taught Masters' programmes in the fields of Law, Business Management, Marketing, and Economics. These students were on a six-week pre-session course where they entered with an International English Language Testing System (IELTS) level of 6.0 and were required to reach the equivalent of IELTS 6.5 by the end of the course in order to progress onto their academic courses. Two nationalities were represented in the sample: Chinese and Vietnamese. In this chapter, the participants have been coded first by nationality, then gender, then a number; for example, Cf1 = Chinese female one and Vm2 = Vietnamese male two.

THEORY KNOWLEDGEABILITY AS THRESHOLD CONCEPT

Threshold concepts research has historically concerned itself with disciplines that exhibit stronger classification, to use Bernstein's terminology (1990), in that from a curriculum perspective, these disciplines possess particular methodologies, concepts, and theoretical frameworks that are confined within the boundaries of the field (see Land et al., 2008; Meyer & Land, 2006, for examples). There is, however, a 'new wave' of research in threshold concepts that concerns itself with concepts of weaker classification. That is, these concepts can traverse boundaries across disciplines. For example, the work of Kiley and Wisker (2009) and Kiley (2009, 2015), as well as the chapters collected in *Naming What We Know* (Adler-Kassner & Wardle, 2016), concern themselves with more 'generic', skills-based concepts, particularly around academic writing (Adler-Kassner & Wardle, 2016) and graduate attributes (Kiley, 2009, 2015; Kiley & Wisker, 2009).

While this shift within the threshold concepts literature may seem on the surface to align more naturally with EAP, this new direction seems to relegate subject specific knowledge in the same way that EAP has tended to do. While this might be useful in the context of those who contributed to the recent literature, this is counterintuitive to the purposes of this study. The contributions within *Naming What We Know* and the work of Kiley and Wisker (2009) also exhibit symptoms of language blindness. Despite naming many features shared within the EAP curriculum as threshold concepts, only one paper within *Naming What We Know* mentions negotiating language differences in academic writing (Matsuda, 2016), but this is merely a statement. There is no language analysis offered here.

Kiley (2009, 2015) and Kiley and Wisker (2009), researching the domain of doctoral study, have identified 'theory' as a threshold concept. However, to say theory itself is a threshold concept is a little misleading. Much of what Kiley (2015) and Kiley and Wisker (2009) describe is more akin to theory *literacy* – that is, not knowledge of a prescribed theory in and of itself, but the ability to employ theory to frame research, to inform thought and argument with theory, and to 'theorise

findings' (Kiley, 2015, p. 52). This is a good example of 'knowledge blindness'; focusing on the process rather than the 'what' (Maton, 2014).

It is necessary here to pause and explore what is meant by the term 'theory' in this chapter. Maton (2014) keenly observes that we have an incredibly limited vocabulary when it comes to theory, using one word to cover a variety of interpretations. This chapter works on the notion of theory as 'a supposition or a system of ideas intended to explain something' (OED, as cited in Stewart, Harte, & Sambrook, 2011, p. 222). Stewart, Harte and Sambrooke (2011) unpack this definition focusing on the importance of three words in particular: a theory *intends* to *explain something*. A theory therefore is explanatory, it is not a given that it is successful in its intention and it is separate to that which it tries to explain. This is the understanding of theory that is it hoped the students will acquire.

Archer speaks of an agent's knowledgeability, whereby 'agents have different degrees of 'discursive penetration', 'practical knowledge' or 'unconscious awareness' of their situations which in turn affect their social practices' (1995, p. 131). The aim of this study is to increase the students' knowledgeability and, consequentially, affect their academic discourse practice. The issue that this study is trying to address is not that students need theory literacy, but that they need 'theory knowledgeability'. What is meant by this is that, before students can be literate with theory, they need knowledge of theories first. Students themselves acknowledge the need to develop theory knowledgeability, as can be seen from the following extracts from the focus group. The first extract is a succinct illustration of the student identifying theory knowledgeability as a threshold concept, if not in those terms, then certainly identifying the 'stuckness' of it.

Cf1: I think we don't know what is theory. We can explain in a dictionary way but when we talk about theory use we are stuck.

A second excerpt reveals the student's awareness of a common phenomenon within the liminal space: mimicry. Kiley and Wisker claim that, 'while in the liminal state students may mimic the language and behaviours that they perceive are required of them, prior to full understanding' (2009, p. 432). The mimicry observed by the student below is an acknowledgement of an unawareness of what theory actually is, which is compounded by the fact that these students were incognisant of any actual theories.

Vm2: We can repeat what is said and paraphrase but we don't really understand what is theory.

This excerpt is also an insightful observation of the students' behaviour during the discussion of their texts. Students often rely heavily on the texts, repeating what is written within it, with their gaze firmly fixed on the text to avoid having to speak independently of it. Discursive penetration is limited, and there is certainly an awareness of existing in the liminal space.

Of course, this one discussion did not solve the troublesomeness of theory knowledgeability. However, it did highlight the need to continue to engage with actual theories. All students agreed that talking about theory was helping them to understand what it is and enabling them to feel a little less troubled about encountering a discussion of theory on their impending postgraduate studies:

Cf1: So in the future when tutor asks you to discuss something you won't panic.

It is now time to turn to the analysis of the discourse that took place within the discussion of a theory.

SYSTEMIC FUNCTIONAL LINGUISTICS

Overview

Systemic Functional Linguistics (SFL) is a framework that has proved highly influential in EAP practice. Halliday's rather dense framework essentially sees 'text as language functioning in context' (Halliday & Matthiessen, 2014, p. 3). To understand language use, it is necessary to understand the lexicogrammatical choices made by the speaker when there is a variety of other choices (Halliday, 1978). Halliday argues that 'just as you choose what to do, and what to say, you also choose what to mean' (2013, p. 17). By employing SFL to analyse choice, we gain a more in-depth understanding of the meaning within our language choices.

In SFL, the basic unit of analysis for understanding these choices is the clause (Flowerdew, 2013). The clause is considered 'a multi-functional construct consisting of three metafunctional lines of meaning' (Halliday & Matthiessen, 2014, p. 211): the textual, the interpersonal, and the ideational. While it should be highlighted that these three metafunctions coexist simultaneously within the structure of the clause (Coffin & Donohue, 2012; Eggins, 2004; Flowerdew, 2013), the ideational metafunction is the sole focus for analysis in this chapter. 'Ideational meanings realise what is called the *field* of discourse (the purpose of the communication and what it is about)' (Flowerdew, 2013, p. 12). In order to identify the ideational and the meanings they construe, it is necessary to perform what is known as a transitivity analysis of the clauses. This involves exploring the processes (verbal groups), participants (nouns) and circumstances (adverbial groups or prepositional phrases) (Flowerdew, 2013) of a clause and therefore signifying the role of each in the clause:

when we analyse the roles of the participants, the processes and the circumstances in a text, we can see the relationships between the people and the things involved, the processes they engage in and the sort of circumstances in which they occur. (p. 17)

There are six Process types: Material, Mental, Behavioural, Verbal, Existential, and Relational (Halliday & Matthiessen, 2014). Put simply, Material processes are

verbal groups that reveal physical action, or ‘doing’; Mental processes are those which relate to internal cognitive and emotional states; Behavioural processes are an outward manifestation of an internal state, for example, we cry because we feel sad. Verbal processes reveal that which has been said; Existential processes reveal what is; Relational processes reveal the attributes of a given Participant (noun) or identifies the Participant.

A transitivity analysis does not simply allow us to see who does what to whom, but when analysed fully, allows us to see power and agency within the processes. It is for this reason that transitivity is often employed in Critical Discourse Analysis. When analysing the students’ discourse then, it is most revealing to consider the agency in their utterances.

Analysis

The transitivity analysis performed here examines the research participants’ lexicogrammatical choices within their discussion (Table 6.1).

There are few instances in the data where the research participants directly refer to their article. What can be seen from the extracts in Table 6.1 is that the students do not place themselves in the dominant participant role of *actor*. If the students do refer to themselves, it is in the more passive role of *senser* and often in the negative, highlighting their perceived lack of knowledge and/or understanding. There is a dearth of language we might expect from postgraduate students when discussing such texts. There are no Verbal processes; neither authors nor students are given a voice. Within the student discourse, the authors of the texts are also deprived of any Mental processes, extricating thought and opinion.

Table 6.1. Transitivity analysis of discussion (including research participants’ errors with grammar and vocabulary use)

Discussion extract 1	My article	using	the semiotics	
	<i>Participant: Actor</i>	<i>Process: Material</i>	<i>Participant: Goal</i>	
Discussion extract 2	they	point to	the use semiotic	to develop a new understanding of law and economics
	<i>Participant: Actor</i>	<i>Process: Material</i>	<i>Participant: Goal</i>	<i>Circumstance: Purpose</i>
Discussion extract 3	It	is	difficult	
	<i>Participant: Carrier</i>	<i>Process: Relational</i>	<i>Participant: Attribute</i>	
Discussion extract 4	(Even) I	don’t know	my article	
	<i>Participant: Senser</i>	<i>Process: Mental</i>	<i>Participant: Phenomenon</i>	

This has implications for how this study needs to go forward. In future iterations, there needs to be an exploration of what role agency has to play in helping students cross the liminal space presented by theory knowledgeability. There also needs to be more explicit engagement with the processes expected of postgraduates when deepening their discursive penetration. This is not only true in this case. Donohue's (2012) excellent example from film studies uses SFL to analyse the Processes necessary in students' acquisition of *mise en scene* as a threshold concept. SFL can be a very powerful tool in helping students understand the Processes that will enable them to traverse the liminal space and internalise the threshold concept in question.

LEGITIMATION CODE THEORY

Overview

Legitimation Code Theory (LCT) has become increasingly popular in educational research in the past decade. LCT's ambition is to gain better insight into knowledge practices that are deemed legitimate in a given context. LCT reveals 'the fundamental 'rules of the game' or bases of achievement ("legitimation") of different contexts, the ways they develop over time, what they enable or constrain, and how they relate to the dispositions actors bring to those contexts' (Van Krieken et al., 2014, p. 173). LCT is a framework comprising five dimensions that allow researchers to capture 'a set of organising principles underlying dispositions, practices and contexts' (Maton, Hood, & Shay, 2016, p. 11). Here, the dimension of Semantics is employed to explore knowledge in terms of semantic gravity and semantic density. *Semantic gravity* (SG) refers to 'the degree of context-dependence of meaning – the stronger the semantic gravity (SG+), the more knowledge is dependent on its context to make sense; the weaker the semantic gravity (SG-), the less dependent knowledge is on its context for meaning' (Van Krieken et al., 2014, p. 175). *Semantic density* (SD) on the other hand 'refers to the degree of condensation of meaning within socio-cultural practices [...] The stronger the semantic density (SD+) the more meanings are condensed within practices; the weaker the semantic density (SD-), the less meanings are condensed' (Maton, 2014, p. 129). The relative strengths of semantic gravity and density are then mapped onto the semantic plane (Figure 6.1) which has four codes:

- *rhizomatic codes* (SG-, SD+) [...] relatively context-independent and complex stances;
- *prosaic codes* (SG+, SD-) [...] relatively context-dependent and simpler stances;
- *rarefied codes* (SG-, SD-) [...] relatively context-independent stances that condense fewer meanings; and
- *worldly codes* (SG+, SD+) [...] relatively context-dependent stances that condense manifold meanings (Maton et al., 2016, p. 16).

Maton et al. (2016) state that rhizomatic and prosaic codes respectively represent the theoretical and practical knowledges that divide many in the field of education.

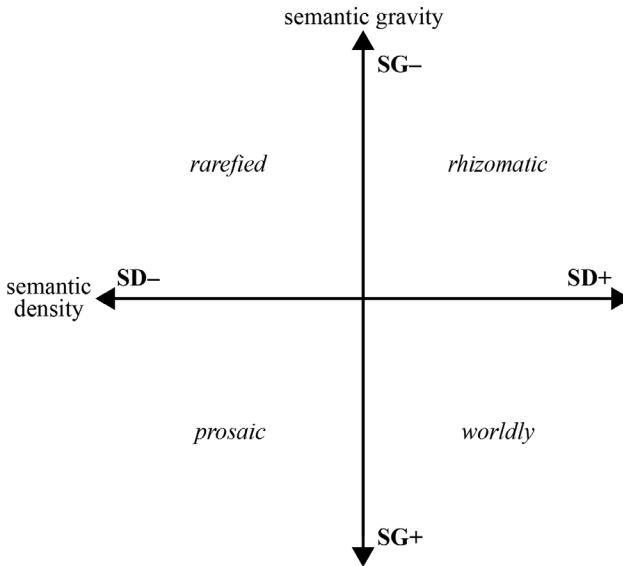


Figure 6.1. The semantic plane (from Maton, 2016, p. 16)

LCT affords a more nuanced understanding with the four quadrants of the semantic plane, rather than allowing an overly simplistic and considerably unhelpful binary. Shay and Steyn (2016) illustrate how curricula can develop students from ‘naïve’ and ‘novice’ (situated within the rarefied code), through to ‘expert’ and ‘master’ (situated in the worldly code). This rather succinctly mirrors the journey from pre- to post-liminal.

Analysis

As can be seen from the extracts below (words in italics are words from the original texts that students read), within the discussion, the participants seem unable to move beyond the rarefied code. Turns generally exhibit the abstract nature of the knowledge being discussed in that the turns are independent of a particular context (SG-), yet turns are unable to build constellations of meaning, indeed unable to build much meaning at all (SD-).

Cm2: I found out er, that *efficiency* and er *creativity* is er are the main part in their [...] and er *market economy*. That’s all I read for understand this.

Cf2: I think *semiotics* is a, is a, is a significant *symbols* of of brand or of product because because in same kind of product a lot of *brand* how can the consumer know very well about your *brand*. It should be kind of *semiotic*?

Cm2: I agree with the idea that *creativity* can create the value of society not the *efficiency* and I also agree that *economic* is *dynamic* not *aesthetic*. So what yours opinion?

Students are not able to unpack and repack the complexity within their reading in order to navigate their way through it. Cf2 is attempting to unpack the complexity of semiotics in Marketing, but with limited success. Cm2 is unable to create any real meaning, let alone relate to a specific context or generalise. The two extracts from Cm2 are almost limited to a random list of words extracted from the article. What is evident is that participants' turns are short and signal that the students have limited resources to cope with the complexity of building a shared understanding of a given theory.

LIMITATIONS OF THE STUDY

As the study that has informed this chapter was a pilot, there are many limitations to consider. Firstly, the sample size was very limited. Only two nationalities were represented within the sample, and most disciplines represented were business-based.

The data are also limited, as they mainly come from one discussion. While this offers some insight into the linguistic and knowledge practices of the liminal space, this needs to be repeated over a series of discussions building a richer picture of both language practice and knowledge practice. As mentioned in the methodology section, participants were asked to complete a diary recording the 'metacognitive affect' of taking part in the discussion. These diaries yielded poor data, and future participants need to be better supported in 'actively engag[ing] with metacognition relating to the threshold concept' (Orsini-Jones, 2010, p. 281) as it can contribute to learners' readiness to traverse the liminal space (Orsini-Jones, 2010).

CONCLUSION

Land et al. (2014, p. 201) rightly observe that 'learning in the liminal space further entails the acquisition and use of new forms of written and spoken discourse and the internalising of these'. However, we cannot make claims such as these without committing to developing a fuller understanding of what this change in discourse demands of the learner. This chapter has attempted to make an initial contribution to do just that by showing that in order to help international postgraduate students traverse the liminal space opened up by the threshold concept of theory knowledgeability, we must analyse the linguistic *and* knowledge practices involved. The complementary frameworks of Systemic Functional Linguistics and Legitimation Code Theory provide insightful analysis of discourse within the liminal space. It is of course no surprise that these participants found their engagement with theory troublesome and lacked agency in their language choices and complexity in their knowledge practice.

In Shay and Steyn's (2016) terms, these participants were 'naïve'. The future study will build on this pilot and aim to plot the participants' journey from 'naïve' to 'master', or from pre- to post-liminal, across a series of discussions providing much richer data and a greater understanding of the discourse practices within the liminal space.

REFERENCES

- Adler-Kassner, L., & Wardle, E. (Eds.). (2016). *Naming what we know classroom edition: Threshold concepts of writing studies*. Boulder, CO: University Press of Colorado.
- Allwright, D., & Bailey, K. M. (1991). *Focus on the language classroom: An introduction to classroom research for language teachers*. Cambridge: Cambridge University Press.
- Archer, M. S. (1995). *Realist social theory: The morphogenetic approach*. Cambridge: Cambridge University Press.
- Bernstein, B. (1990). *The structuring of pedagogic discourse, Vol. IV class, codes and control*. London: Routledge.
- Coffin, C., & Donohue, J. (2014). *A language as social semiotic-based approach to teaching and learning in higher education* (Language Learning, Monograph series). Malden, MA: John Wiley & Sons.
- Donohue, J. (2012). Using systemic functional linguistics in academic writing development: An example from film studies. *Journal of English for Academic Purposes*, 11(2), 4–16. <https://doi.org/10.1016/j.jeap.2011.11.003>
- Dörnyei, Z. (2007). *Research methods in applied linguistics: Quantitative, qualitative and mixed methodologies*. Oxford: Oxford University Press.
- Eggs, S. (2004). *An introduction to systemic functional linguistics* (2nd ed.). London: Continuum.
- Flowerdew, J. (2013). *Discourse in English language education*. London and New York, NY: Routledge.
- Halliday, M. A. K. (1978). *Language as social semiotic: The social interpretation of language and meaning*. Victoria: Edward Arnold.
- Halliday, M. A. K., & Matthiessen, M. I. M. (2014). *Halliday's introduction to functional grammar* (4th ed.). Abingdon: Routledge.
- Hasan, R. (2002, July). *Semiotic mediation, language and society: Three exotopic theories – Vygotsky, Halliday and Bernstein*. Presentation to the Second International Basil Bernstein Symposium: Knowledges, Pedagogy and Society, Cape Town, South Africa.
- Kiley, M. (2009). Identifying threshold concepts and proposing strategies to support doctoral candidates. *Innovations in Education and Teaching International*, 46, 293–304. doi:10.1080/14703290903069001
- Kiley, M. (2015). 'I didn't have a clue what they were talking about': PhD candidates and theory. *Innovations in Education and Teaching International*, 52(1), 52–63. doi:10.1080/14703297.2014.981835
- Kiley, M., & Wisker, G. (2009). Threshold concepts in research education and evidence of threshold crossing. *Higher Education Research and Development*, 28(4), 431–441. doi:10.1080/07294360903067930
- Land, R., Meyer, J. H. F., & Smith, J. (Eds.). (2008). *Threshold concepts within the disciplines*. Rotterdam, The Netherlands: Sense Publishers.
- Land, R., Rattray, J., & Vivian, P. (2014). Learning in the liminal space: A semiotic approach to threshold concepts. *Higher Education*, 67(2), 199–217. doi:10.1007/s10734-013-9705-x
- Maton, K. (2014). *Knowledge and knowers: Towards a realist sociology of education*. London: Routledge.
- Maton, K., Hood, S., & Shay, S. (Eds.). (2016). *Knowledge-building: Educational studies in Legitimation Code Theory*. London: Routledge.
- Matsuda, P. K. (2016). Writing involves the negotiation of language differences. In L. Adler-Kassner & E. Wardle (Eds.), *Naming what we know classroom edition: Threshold concepts of writing studies* (pp. 68–70). Boulder, CO: University Press of Colorado.

- Meyer, J. H. F., & Land, R. (Eds.). (2006). *Overcoming barriers to student understanding*. London: Routledge.
- Meyer, J. H. F., Land, R., & Baillie, C. (Eds.). (2010). *Threshold concepts and transformational learning*. Rotterdam, The Netherlands: Sense Publishers.
- Middendorf, J., & Pace, D. (Eds.). (2004). Decoding the disciplines: Helping students learn disciplinary ways of thinking. *New Directions for Teaching and Learning*, 2004(98), 1–12.
- Orsini-Jones, M. (2010). Troublesome grammar knowledge and action-research-led assessment design: Learning from liminality. In J. H. F. Meyer, R. Land, & C. Baillie (Eds.), *Threshold concepts and transformational learning* (pp. 281–299). Rotterdam, The Netherlands: Sense Publishers.
- Shay, S., & Steyn, D. (2016). Enabling knowledge progression in vocational curricula: Design as a case study. In K. Maton, S. Hood, & S. Shay (Eds.), *Knowledge-building: Educational studies in legitimation code theory* (pp. 138–157). London: Routledge.
- Shopkow, L. (2010). What decoding the disciplines can offer threshold concepts. In J. H. F. Meyer, R. Land, & C. Baillie (Eds.), *Threshold concepts and transformational learning* (pp. 317–331). Rotterdam, The Netherlands: Sense Publishers.
- Stewart, J., Harte, V., & Sambrook, S. (2011). What is theory? *Journal of European Industrial Training*, 35(3), 221–229. <https://doi.org/10.1108/03090591111120386>
- Van Krieken, R., Habibis, B., Smith, P., Hutchins, B., Martin, G., & Maton, K. (2014). *Sociology: Themes and perspectives* (5th ed.). Sydney: Pearson.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.